

What is claimed is:

~~1.~~ A purified polypeptide comprising an amino acid sequence selected from the group consisting of:

- a) an amino acid sequence of SEQ ID NO:1.
 - b) a naturally-occurring amino acid sequence having at least 90% sequence identity to the sequence of SEQ ID NO:1.
 - c) a biologically-active fragment of the amino acid sequence of SEQ ID NO:1, and
 - d) an immunogenic fragment of the amino acid sequence of SEQ ID NO:1.
2. An isolated polynucleotide encoding a polypeptide of claim 1.
 3. A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 2.
 4. A cell transformed with a recombinant polynucleotide of claim 3.
 5. A transgenic organism comprising a recombinant polynucleotide of claim 3.
 6. A method for producing a polypeptide of claim 1, the method comprising:
 - a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and
 - b) recovering the polypeptide so expressed.
 7. An isolated antibody which specifically binds to a polypeptide of claim 1.

8. An isolated polynucleotide comprising a sequence selected from the group consisting of:

- a) a polynucleotide sequence of SEQ ID NO:2.
- b) a naturally-occurring polynucleotide sequence having at least 90% sequence identity to the sequence of SEQ ID NO:2.
- c) a polynucleotide sequence complementary to a).
- d) a polynucleotide sequence complementary to b) and
- e) a ribonucleotide equivalent of a)-d).

9. An isolated polynucleotide comprising at least 60 contiguous nucleic acids of claim 8.

10. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 8, the method comprising:

- a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and
- b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

11. A method of claim 10, wherein the probe comprises at least 60 contiguous nucleotides.

12. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 8, the method comprising:

- b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

13. A composition comprising an effective amount of a polypeptide of claim 1 and an acceptable excipient.

14. A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
- b) detecting agonist activity in the sample.

15. A method for screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
- b) detecting antagonist activity in the sample.

16. A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a polynucleotide sequence of SEQ ID NO:2, the method comprising:

- a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide,
- b) detecting altered expression of the target polynucleotide, and
- c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.

17. A method for assessing toxicity of a test compound, said method comprising:

- a) treating a biological sample containing nucleic acids with the test compound;
- b) hybridizing the nucleic acids of the treated biological sample with a probe

said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 8 or fragment thereof;

- c) quantifying the amount of hybridization complex; and
- d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

18. A method for treating a disease or condition associated with decreased expression of functional HGST, comprising administering to a patient in need of such treatment the composition of claim 13.

19. A composition comprising an agonist compound identified by a method of claim 14 and a pharmaceutically acceptable excipient.

20. A method for treating a disease or condition associated with decreased expression of functional HGST, comprising administering to a patient in need of such treatment a composition of claim 19.

21. A composition comprising an antagonist compound identified by a method of claim 15 and a pharmaceutically acceptable excipient.

22. A method for treating a disease or condition associated with overexpression of functional HGST, comprising administering to a patient in need of such treatment a composition of claim 21.

23. A method of screening for a compound that specifically binds to the

suitable conditions, and

b) detecting binding of the polypeptide of claim 1 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 1.

5 24. A method of screening for a compound that modulates the activity of the polypeptide of claim 1, said method comprising:

a) combining the polypeptide of claim 1 with at least one test compound under conditions permissive for the activity of the polypeptide of claim 1.

10 b) assessing the activity of the polypeptide of claim 1 in the presence of the test compound, and

c) comparing the activity of the polypeptide of claim 1 in the presence of the test compound with the activity of the polypeptide of claim 1 in the absence of the test compound, wherein a change in the activity of the polypeptide of claim 1 in the presence of the test compound is indicative of a compound that modulates the activity of the polypeptide of claim 1.

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